

2010 missoulaavalanche.org Survey Summary

Steve Karkanen, Director of the West Central Montana Avalanche Center and Dudley Improta, Forecaster WCMAC wanted to learn more about the users that came to the website missoulaavalanche.org for avalanche related information. Karkanen had a professional writer review and critique advisories from the 2008/2009 season, the idea to “profile” our readers, so to speak, came out of this writing review. The original questions were “who’s reading our advisories?” and “can we improve our advisories by knowing the background of the readers?” The project also provided the opportunity to elicit comments and criticisms about the West Central Montana Avalanche Center and the website missoulaavalanche.org. The West Central Montana Avalanche Foundation (the friends group for the Center) contracted with Dr. Shawn Clouse from the University of Montana School of Business and the Management Information Student Association (MISA) from the UM Business School to run a survey of avalanche website users and analyze the data.

The survey asked users questions about the quality of the avalanche alerts on the website as well as demographic information to profile the survey participants and finally asked the participants a series of questions related to the usability of the website.

Background Information

The goals of the missoulaavalanche.org website are to provide avalanche advisories for the West Central Montana region. The organization also provides avalanche classes for professionals (EMT’s, S & R, and LifeFlight Crews) and the general public, including a public school program.

The areas of interest for the survey project were the demographics of website users, opinions on avalanche advisory delivery, if users have been caught in an avalanche and if the avalanche was reported, what avalanche equipment website users carry into the backcountry, what winter businesses participants work in, how they travel into the backcountry, satisfaction with the frequency of avalanche advisories, the different types of communication methods that could be used to deliver the advisories, some general information about the avalanche advisories, and information about the website usability and satisfaction.

Assessment

The survey instrument was developed in the fall of 2009. The delivery method for the survey was online via Survey Monkey from January 15, 2010 to March 9, 2010. Participants were solicited via an email, there was a link to the survey on the www.missoulaavalanche.org website, and there were multiple requests to participate written in several of the avalanche advisories. To encourage participation, t-shirts and an avalanche transceiver (BCA donated the transceiver) were available as prizes. Participants were entered into the drawing after they completed the survey. The process included one online survey with all of the research questions and a second survey was used to gather names, phone numbers, and email addresses for the drawing. This was done to ensure all survey submissions were anonymous. This project is defined as descriptive research.

Findings

The following is the executive summary that identifies the main findings from the survey. Demographics – The survey participants were highly educated (81% with college degrees), had an average age of 36 years, and 82% were male. The income level was a little below the 2006-2008 Montana Median Household income average of \$44,043.

- Website Visitation – Participants come to the website frequently with 74.9% reporting one to two times per week and 82.1% once per month or more.
- Website Additions – Participants wanted more videos, a discussion board, blog, and a web interface suitable for smart phones.
- Backcountry Use – 67.4% recreate in the winter backcountry once per month or more.
- Avalanche Experience – 26.3% or 85 participants reported direct experience with an avalanche, but only 41% reported the avalanche. 98.8% of those participants carry some type of avalanche rescue equipment like transceivers, shovels, probes, and cell phones.

- Avalanche Advisories – Participants want more frequent advisory reports, but they also say that the two advisories per week are working well. They find the advisories very helpful with a 6.25 rating on a 7-point scale. Participants want more media and less text in the advisories.
- YouTube – 85% of the participants have watched the YouTube videos and felt they were very valuable (6.02 rating on a 7-point scale). YouTube videos are an excellent choice for avalanche information delivery.
- Avalanche Communication – Participants want text messages, Facebook/Twitter integration, and there was more than one suggestion (ironic because of the popularity of using technology) for roadside signs showing avalanche danger warning similar to fire danger warning signs.
- Avalanche Education Program in Schools - Almost 93% of the participants supported a standardized avalanche education program in local schools.
- Open-Ended Responses – Participants submitted about 30 pages of responses to open-ended questions. This information, which is not included (over 300 comments) will be consulted when making changes to the website or advisories. Open-ended responses always make for interesting reading and provide valuable information when trends in responses are noted.
- Website Usability Models - There is low risk associated with using the website and participants have a high degree of trust in the information provided. Increasing usability and satisfaction leads to higher behavioral intentions or more users utilizing the information from the website for its intended purpose of informing winter backcountry users on avalanche conditions. For more information on website usability models contact Dr. Shawn Clouse from the University of Montana School of Business.
shawn.clouse@business.umt.edu

The project gathered a lot of information from the aforementioned open-ended responses to detailed demographics such as how much the users spent on winter backcountry gear annually to marital and family status. The following tables and figures were selected as most relevant to primary goal of understanding the activities and background of advisory readers.

Figure 1: *How often do you visit the website?*

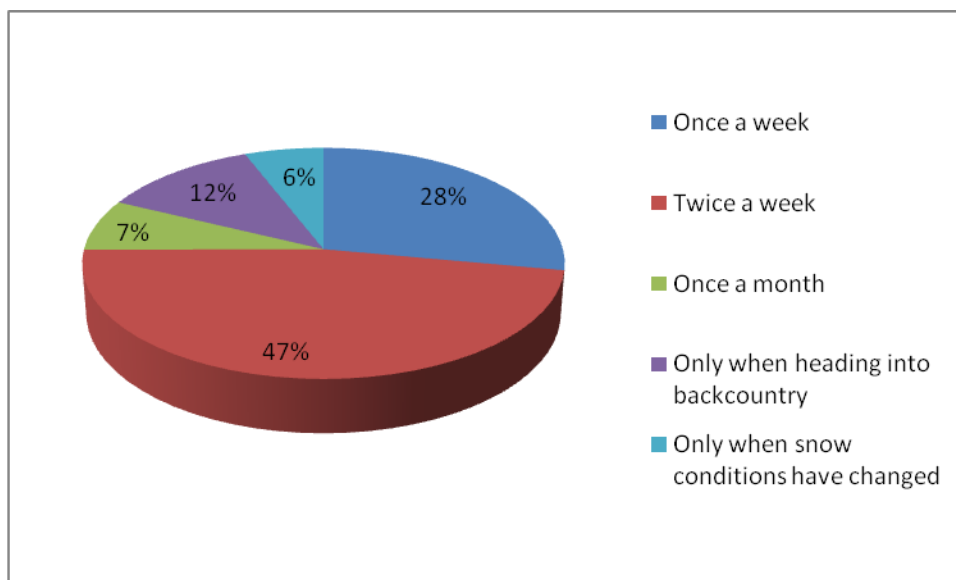


Figure 2: Other information accessed on the website (multiple items)

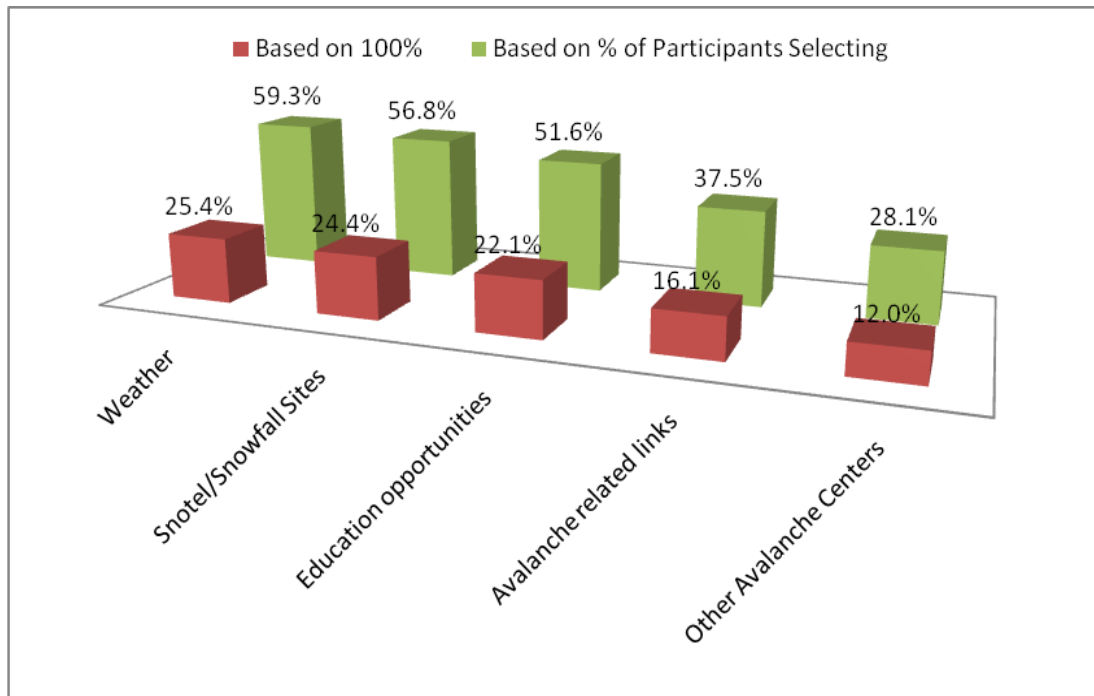


Figure 3: How often participants recreate in the winter backcountry

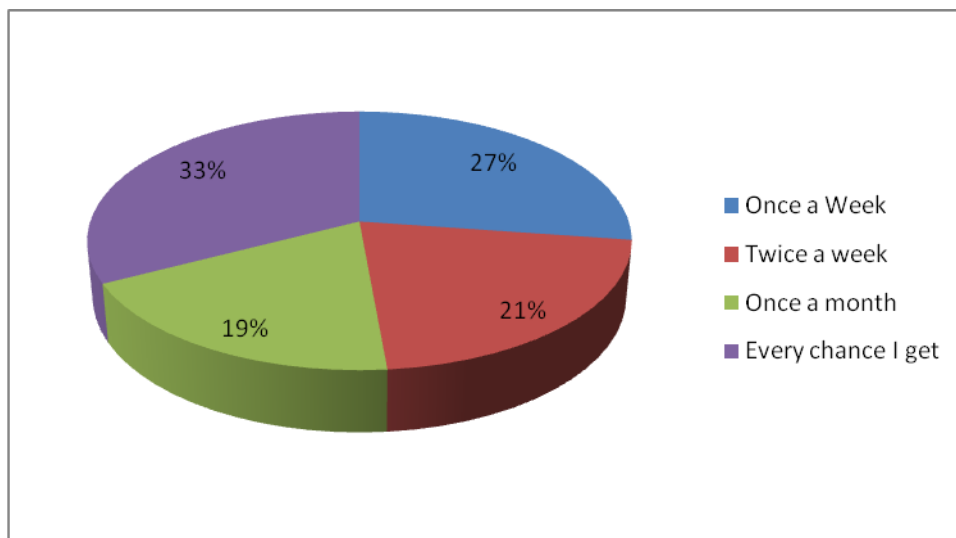


Figure 4: Participants avalanche training level

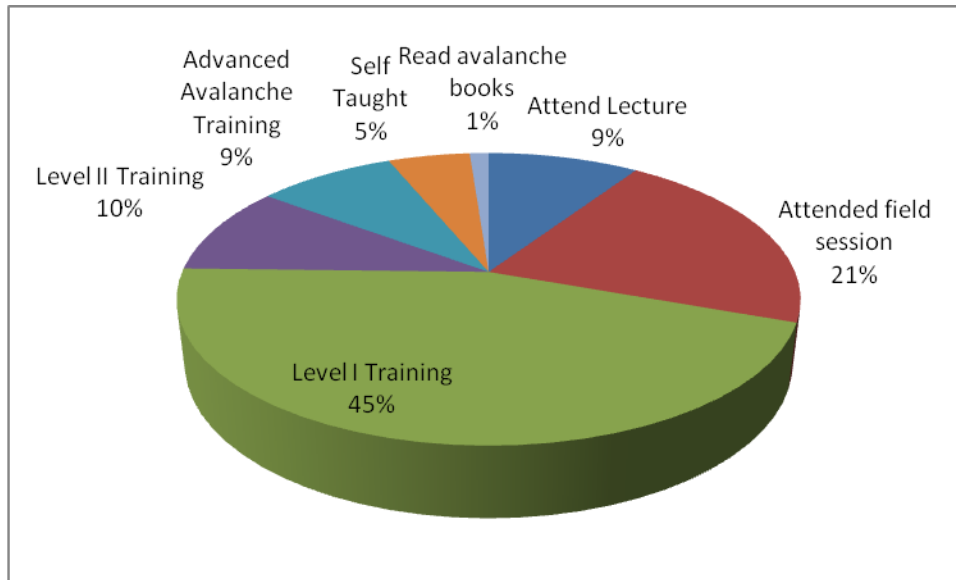


Table 1: Participants caught in and reporting an avalanche

Number	Question	Responses	N	Percent
Q4-1	Have you ever been caught in an avalanche or been a part of a group when someone was caught in an avalanche?	Yes	85	26.32%
		No	238	73.68%
		Total	323	100.00%
Q5-1	Was the avalanche reported (to ski patrol, sheriff's department, avalanche center, etc.)?	Yes	34	40.96%
		No	49	59.04%
		Total	83	100.00%

Figure 5: Avalanche equipment participants carry in the winter backcountry

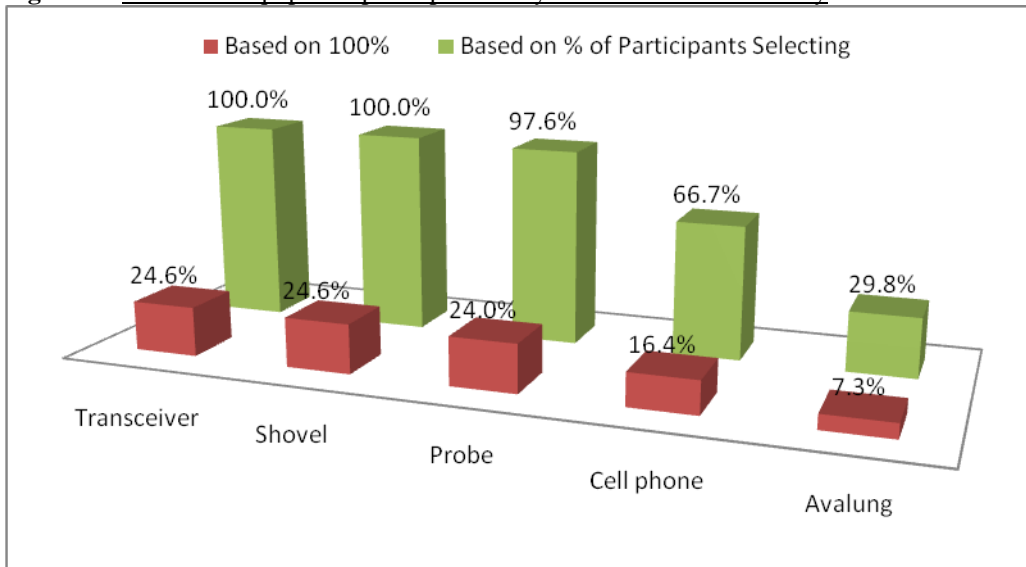


Figure 6: Backcountry travel methods

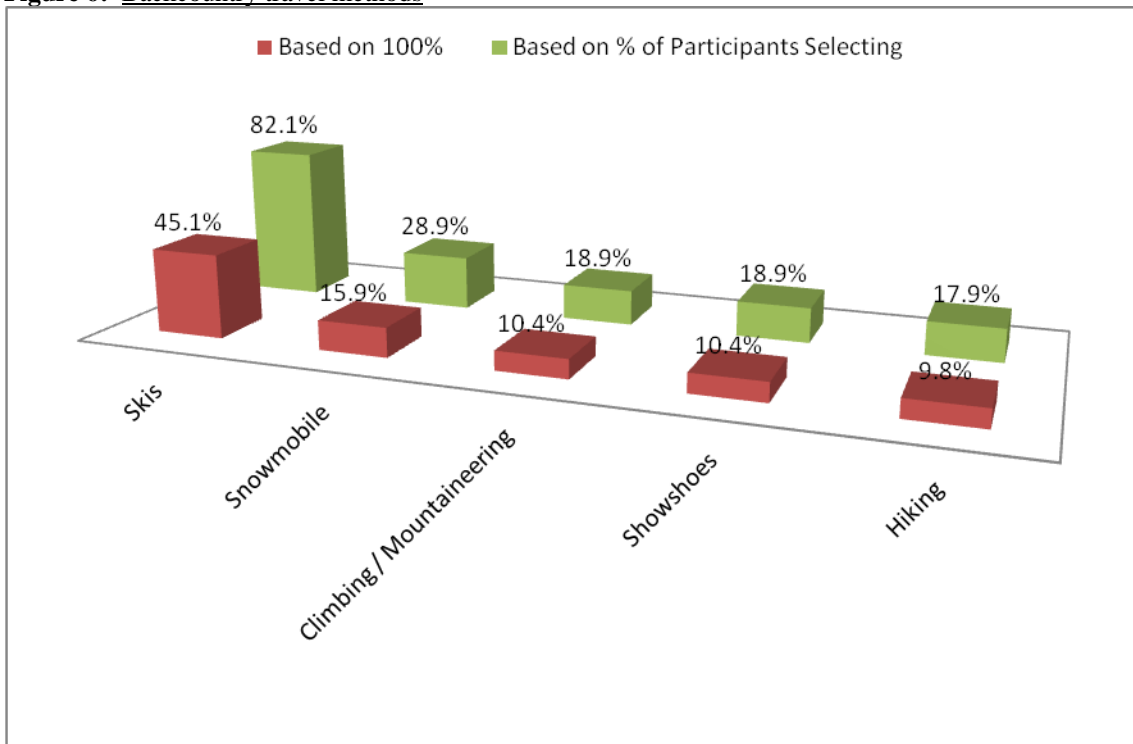
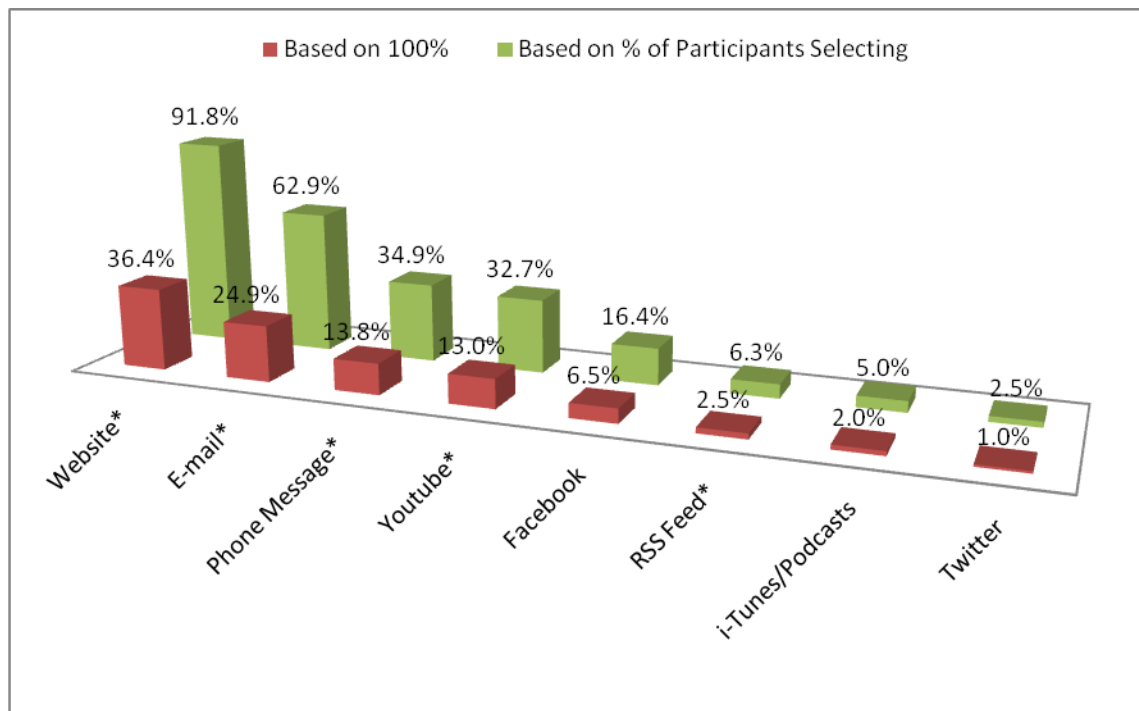


Figure 7: Preferred communication methods to access avalanche information



Generally, the users of missoulaavalanche.org seem satisfied with the product. However, criticisms and suggestions were noted. Actions and changes will be considered from the survey results; and, no doubt, some will be implemented. Items listed below are a sampling of actions either taken or to be considered.

Two actions from the assessment have taken place:

- 1) Comments from users about the major fund raising event (Pray for Snow Party) were taken into account during the planning committee's first meeting.
- 2) Additional education events and Level I and II courses are being planned to meet increasing need in the area.

The following actions should be considered:

- 1) Using alternative communication methods (twitter, NPR radio) to broadcast avalanche advisories.
- 2) Change the wording or format of the avalanche advisories to insure the public understands data is collected from the entire region.
- 3) Change the presentation of the youtube clips to insure the public understands the youtube clip is not the advisory (related to #2).
- 4) Have the main forecasters routinely visit diverse areas within the West Central Montana region.
- 5) Many users asked for information that is already supplied; so brainstorm ways to make the information stand out on the web pages.
- 6) Brainstorm for new funding sources.
- 7) Consider a third advisory day.

Any questions or comments regarding the survey or the results can be sent to info@missoulaavalanche.org .